

Listing of Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently amended) An immunogenic composition, comprising:

(a) ~~at least one viral envelope protein or fragment thereof exterior to a viral membrane, wherein said viral envelope protein or fragment thereof is the~~ an HIV gp41/gp120 complex;

(b) at least one stabilizing peptide in an amount effective to disrupt formation of one or more structural intermediates necessary for viral fusion and entry selected from the group consisting of: a peptide comprising SEQ ID NO:2, a peptide comprising a fragment of SEQ ID NO:2, a peptide comprising SEQ ID NO:3, a peptide comprising a fragment of SEQ ID NO:3, a peptide comprising SEQ ID NO:4, a peptide comprising a fragment of SEQ ID NO:4, ~~a peptide comprising SEQ ID NO:5, a peptide comprising a fragment of SEQ ID NO:5, a peptide comprising SEQ ID NO:6, a peptide comprising a fragment of SEQ ID NO:6, a peptide comprising SEQ ID NO:7, a peptide comprising a fragment of SEQ ID NO:7,~~ a peptide comprising SEQ ID NO:9, a peptide comprising a fragment of SEQ ID NO:9, a peptide comprising any combination of SEQ ID NOs:2-~~[[7]]~~4 and 9, and a peptide comprising any combination of fragments of SEQ ID NOs:2-~~[[7]]~~4 and 9; and,

(c) soluble CD4, wherein said stabilizing peptide associates with the ~~envelope protein or fragment thereof~~ HIV gp41/gp120 complex to form a stabilized, fusion-active structure;

wherein said immunogenic composition is suitable to elicit production of an antibody which binds to the fusion-active form of HIV gp41/gp120 complex, and thereby inhibits the fusion of gp41/gp120 complex with the membrane of a target cell.

Claims 2-6. (Cancelled)

7. (Currently amended) An immunogenic composition, produced by a process comprising:

- (a) incubating at least one non-infectious viral particle expressing HIV gp41/gp120 with one or more stabilizing peptides in a concentration effective to disrupt formation of one or more structural intermediates necessary for viral fusion and entry to obtain a mixture; wherein said stabilizing peptide is selected from the group consisting of: a peptide comprising SEQ ID NO:2, a peptide comprising a fragment of SEQ ID NO:2, a peptide comprising SEQ ID NO:3, a peptide comprising a fragment of SEQ ID NO:3, a peptide comprising SEQ ID NO:4, a peptide comprising a fragment of SEQ ID NO:4, ~~a peptide comprising SEQ ID NO:5, a peptide comprising a fragment of SEQ ID NO:5, a peptide comprising SEQ ID NO:6, a peptide comprising a fragment of SEQ ID NO:6, a peptide comprising SEQ ID NO:7, a peptide comprising a fragment of SEQ ID NO:7,~~ a peptide comprising SEQ ID NO:9, a peptide comprising a fragment of SEQ ID NO:9, a peptide comprising any combination of SEQ ID NOs:2-[[7]]4 and 9, and a peptide comprising any combination of fragments of SEQ ID NOs:2-[[7]]4 and 9; and

- (b) adding soluble CD4 to the mixture, wherein said stabilizing peptide or peptides associate with said HIV gp41/gp120 complex, and whereby an immunogenic composition is created;

wherein said immunogenic composition is suitable to elicit production of an antibody which binds to the fusion-active form of HIV gp41/gp120 complex, and thereby inhibits the fusion of gp41/gp120 complex with the membrane of a target cell.

Claims 8-29 (Cancelled)

30. (Currently amended) A product produced by a method comprising:
- (a) incubating at least one non-infectious viral particle with HIV gp41/gp120 complex exterior to the viral membrane, with at least one stabilizing peptide, in an amount effective to disrupt formation of one or more structural intermediates necessary for viral fusion and entry, to obtain a protein/peptide first mixture; wherein said stabilizing peptide is selected from the group consisting of: a peptide comprising SEQ ID NO:2, a peptide comprising a fragment of SEQ ID NO:2, a peptide comprising SEQ ID NO:3, a peptide comprising a fragment of SEQ ID NO:3, a peptide comprising SEQ ID NO:4, a peptide comprising a fragment of SEQ ID NO:4, ~~a peptide comprising SEQ ID NO:5, a peptide comprising a fragment of SEQ ID NO:5, a peptide comprising SEQ ID NO:6, a peptide comprising a fragment of SEQ ID NO:6, a peptide comprising~~

~~SEQ ID NO:7, a peptide comprising a fragment of SEQ ID NO:7, a~~
peptide comprising SEQ ID NO:9, a peptide comprising a fragment of
SEQ ID NO:9, a peptide comprising any combination of SEQ ID NOs:2-
[[7]]4 and 9, and a peptide comprising any combination of fragments of
SEQ ID NOs:2-[[7]]4 and 9;

- (b) adding soluble CD4 to the first mixture to create a second mixture; and
- (c) isolating the resulting fusion-active protein/peptide complex from the second mixture;

wherein said fusion-active protein peptide complex is suitable to elicit production of an antibody which binds to the fusion-active form of HIV gp41/gp120 complex, and thereby inhibits the fusion of gp41/gp120 complex with the membrane of a target cell.

31. (Currently amended) The immunogenic composition of claim 1, wherein said peptide has an amino acid sequence selected from the group consisting of: SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, ~~SEQ ID NO:5; SEQ ID NO:6; SEQ ID NO:7~~, and SEQ ID NO:9.

32. (Currently amended) The immunogenic composition of claim 7, wherein said peptide has an amino acid sequence selected from the group consisting of: SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, ~~SEQ ID NO:5; SEQ ID NO:6; SEQ ID NO:7~~, and SEQ ID NO:9.

33. (Currently amended) The product formed by the method of claim 30, wherein said peptide has an amino acid sequence selected from the group consisting of: SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, ~~SEQ ID NO:5; SEQ ID NO:6, SEQ ID NO:7,~~ and SEQ ID NO:9.

34. (Previously presented) The immunogenic composition of claim 30, wherein said peptide is SEQ ID NO:2.

35. (Withdrawn) The immunogenic composition of claim 30, wherein said peptide is SEQ ID NO:3.

36. (Withdrawn) The immunogenic composition of claim 30, wherein said peptide is SEQ ID NO:4.

Claims 37-39 (Cancelled)

40. (Withdrawn) The immunogenic composition of claim 30, wherein said peptide is SEQ ID NO:9.